

Title (en)  
BLOW-MOLDED FOAM AND PROCESS FOR PRODUCING THE SAME

Title (de)  
BLASGEFORMTER SCHAUM UND VERFAHREN ZU DESSEN HERSTELLUNG

Title (fr)  
MOUSSE MOULEE PAR SOUFFLAGE ET PROCEDE DE FABRICATION

Publication  
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Application  
**EP 98955975 A 19981127**

Priority  
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Abstract (en)  
[origin: WO9928111A1] Hollow blow-molded foams are obtained by extruding a molten resin containing a foaming agent by means of an extruder to form a cylindrical foamed parison and disposing the parison in a mold to conduct blow molding. The above process has, however, failed in providing molded articles having a high expansion ratio and a large wall thickness, when the base resin used is a polypropylene resin. The process of this invention employs a base resin consisting mainly of a polypropylene resin and having a melt tension (MT) at 230 DEG C of 10 gf or higher and a melt flow rate (MFR) of 0.5 g/10 min or higher. The process comprises adding a foaming agent to the base resin, melt-kneading the mixture at high temperature and high pressure with an extruder to give a foamable melt, extruding the melt through an annular die (5) and foaming the same to form a cylindrical foamed parison (4), subsequently closing molds (6, 6) to hold the soft parison (4) in the molds, and then blowing pressurized air from an air blowing nozzle (7) into the parison (4) to blow-mold it into a hollow shape conforming to the molds.

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Citation (search report)  
• [E] WO 9932544 A1 19990701 - TREXEL INC [US], et al  
• [E] WO 9853986 A1 19981203 - TETRA LAVAL HOLDINGS & FINANCE [CH], et al  
• [A] WO 9619384 A1 19960627 - WELLA AG [DE], et al  
• [A] WO 9611216 A1 19960418 - BOREALIS AS [DK], et al  
• [A] DATABASE WPI Section Ch Week 199445, Derwent World Patents Index; Class A32, AN 1994-363113, XP002151771  
• [A] DATABASE RAPRA ABSTRACTS RAPRA TECHNOLOGY LTD., SHAWBURY, SHREWSBURY, SHROPSHIRE, GB; 1990, XP002151769 & "Air ducts are vacuum formed on a blow moulding machine", MODERN PLASTICS INTERNATIONAL, vol. 20, no. 2, - 2 February 1990 (1990-02-02), pages 12 - 13  
• [A] DATABASE RAPRA RAPRA TECHNOLOGY LTD., SHAWBURY, SHREWSBURY, SHROPSHIRE, GB; XP002151770 & "blow moulding now possible in PP foam", BP & R. BRITISH PLASTICS AND RUBBER., - October 1997 (1997-10-01), MCM PUBLISHING, LONDON., GB, pages - 45, ISSN: 0307-6164  
• See references of WO 9928111A1

Cited by  
EP1403027A3; EP1844919A4; CN105814125A; EP3039063A4; US7014801B2; US7727606B2; WO2005102668A2; US10633139B2; WO2005102668A3; US10350812B2; US10576679B2; US10792851B2

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